The Pinnacle of the Canadian Alps

The Opening of a New American Scientific Storehouse

By Carl Hawes Butman, Smithsonian Institution

FOLLOWING the much reiterated slogan of American railroad and steamboat lines, "See America first," it seems pertinent to extol the characteristics of a part of this continent only recently explored, but in the near future to be opened for the inspection of its scenic wonders, comprising mountain ranges, peaks, glaciers, rivers, lakes, and waterfalls of exceptionally wild grandeur and romantic beauty. There are features which are calculated to surprise and interest even the most *blasé* tourist, scientist, or artist. The region referred to is that portion of the Rocky Mountains lying, unfortunately, just outside our border, in the territories of British Columbia and Alberta, Canada, and known as the Robson Peak District.

The majestic mountain from which this district takes its name, originally called Robson Peak by Milton and Cheadle in 1865, but later designated Mount Robson, has now been renamed Robson Peak by Dr. Charles D. Walcott, secretary of the Smithsonian Institution. It stands in the very heart of a severely cold and rugged country unbroken by trail or blaze, amid the most vivid and diversified natural scenery, surrounded by a number of massive, though less lofty, mountain ranges and peaks, and thrusts its rocky spire upward through glaciers, icefields, and even the clouds, to a height of 13,068 feet above the sea. Although it is only about eighth in height in America, it is the highest point on the Continental Divide in Canada, and has been aptly termed "The Monarch of the Canadian Rockies" by Dr. Walcott in both his descriptive and technical reports upon his investigations in this locality.

This gigantic peak is located thirty-two miles west-northwest of Yellowhead Pass on the Continental Divide, and just six miles north of Fraser River and the Mount Robson station on the Grand Trunk Pacific Railway. It locates the center of a section of Canadian territory twenty miles in diameter, which is soon to be opened to explorers and travelers. One gateway to this veritable wonder-land is already open from Edmonton, Alberta, *via* the Grand Trunk to Mount Robson station, which affords the sightseer a view of the Peak itself, only six miles distant. Already Robson, with its approaches, has been roughly explored and mapped by the Alpine Club of Canada, which plans to establish its next summer camp at the foot of Robson on the shores of Berg Lake, in the clear and cool atmosphere attending a 5,500 foot elevation. Soon, undoubtedly, it will be no uncommon sight to see many tourist parties tramping over the great ice fields and scaling the stony mountain sides, for it is thus, practically in a night, that the American recreation and outdoor loving populace seize upon opportune moments to be early on the scene of a newly opened playground.

Robson Peak was virtually unknown, except to a few venturesome hunters and trappers, until about 1909, when Dr. A. P. Coleman wrote a graphic description of its grandeurs and related his attempts to scale its scarcely pregnable ramparts, although as early as 1865 Milton and Cheadle, two English explorers, made mention of it in their article, "The Northwest Passage by Land," and later McEvoy and Kinney told of this great Canadian peak and the country surrounding it.

Others have since visited the region and have also attempted a description of this ice and snow clothed mountain and its remarkable and wonderful Alp-like environs, but like most of those who have essayed to chronicle the virtues of the Grand Canyon of Arizona, they have failed; it is well nigh impossible to do such scenery justice.

One of the most inspiring and spectacular scenes in the world may be witnessed from the slopes of the peaks and mountains surrounding Robson, particularly from a great ridge south of Mumm Peak at an elevation of about 1,800 feet above Robson Pass, where an extensive view of what is termed the Robson massif may be gained. Directly opposite protrudes a great monument of solid barren rock called Iyatunga (black rock), and just back of this Robson towers, a veritable pinnacle of the world, its rocky cliffs 7,000 feet from the shores of Berg Lake rising to the summit where gather daily the mists and rain clouds from the Pacific to be condensed into snow and ice, thus adding constantly to the deep snow banks and wide ice-fields which form a perpetual crown for this regal peak, and make possible the several giant glaciers. Down its eroded sides sweep three of these rivers of solid ice. The largest and longest of them, Hunga, formerly Robson Glacier, but renamed from the Assiniboine Indian word for chief, is formed in the *névé* between Robson Peak and Mount Resplendent. From there it swerves to the northwest, encircling the base of the peak with its chill arm, and glides sedately between Iyatunga and Titkana (bird peak), not unlike a polar giant's stairway descending in a slow, graceful spiral through these two mountainous newell posts, a distance of over three miles, to where it breaks up in the pass below. Of the two other glaciers to the southeast, both of which slide more directly into the lake, the nearer one, Blue, is the more attractive feature, on account of its nearly head-long drop of over a mile from the icy crest of the Peak to the lake shore, where its great ice sheet, now fully two miles in width, is dismembered into small bergs which float away. Blue Glacier, literally a sparkling, frigid river of bluish ice, hangs, apparently suspended by some strange force, ready to fall *en masse*, at any moment from its precipitous bed. The other, Chupo (Mist) Glacier, scarcely visible in its envelope of clouds and mist, though not so remarkable for its beauty and size, proves of great geologic value; it bears on its surface and in its icy grasp many fossiliferous rocks dragged from the top of the mountain to the moraine below, which frequently contain interesting fossil specimens in the form of marine shells and fragments of crab-like animals of the so-called Ordovician time. Beyond the glaciers, far to the southeast, is the Miniohan mountain range, which lends perspective to the scene by forming a distant horizon, while on the northwest, Titkana, once known as Ptarmigan Peak, frames the picture with its high, rocky slopes.

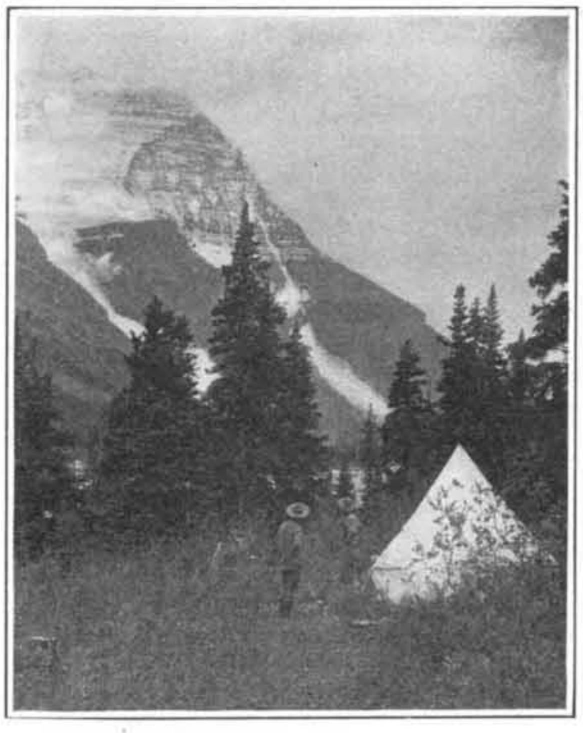

Fig. 1.—A view of Robson Peak, the pinnacle of the Canadian Alps. Spring in the valley and winter on the mountain. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

Just three and one half miles north-northeast of Robson the Continental Divide runs from Yellowhead Pass irregularly to the northwest, passing between Lake Adolphus and Berg Lake. On a rocky projection near Titkana Peak, the water from the Hunga Glacier divides; one stream turns to the northwest to Lake Adolphus, into the Smoky River drainage of Alberta, thence through the Peace and Slave Rivers to Great Slave Lake, and north *via* the McKenzie River into the Arctic Ocean; the larger stream flows southwest into Berg Lake, from there over Emperor Falls into Grand Fork and Fraser Rivers, and eventually to the Pacific Ocean. It is possible to stand on a certain block of ice on the Hunga Glacier and watch the water running over its surface divide, on this very block, and flow, one branch to the Pacific and the other to the Arctic Ocean. One experiences an odd sensation, thus to stand, as it were, on the ridge pole of the continent, where the future course of a floating chip or other object may be determined by a slight movement of the observer's foot or hand, causing it to take either the right or left hand branch.

To this Canadian alpine district, Dr. Walcott makes summer trips for the continuance of his investigations and studies in the comparison of the section of Cambrian rocks there, with that of the line of the railway, one hundred and fifty miles to the south.

Outfitting at Fitzhugh, a small town on the Grand Trunk Pacific, last summer's party crossed the Continental Divide over the Yellowhead Pass and turned north from the railway at Moose River, seventeen miles west of the pass. From this point they followed the course of the Moose River to its source in the pass of that name, making several stops *en route*, and encamped at the head of Calumet Creek, a tributary of the Smoky River. The camp farthest out, the final one, was at Robson Pass between Berg Lake and Lake Adolphus, from which several side trips were made.

Besides carrying out the main object of the expedition, that of securing specimens of the various fossils from the localities visited, and making a general reconnaissance-section of the great block of Cambrian and Ordovician strata from which the mountains of this region have been formed by uplift and erosion, Dr. Walcott found opportunity for making many fine photographs, especially panoramic views showing the geological formations, while Mr. Lett photographed a number of unusually striking and picturesque scenes in this neighborhood. Through the courtesies of these gentlemen, several photographs are herewith reproduced.

The summer's observations and measurements extended the geological section from Moose Pass southwest over Tah Peak, Mount Mahto, Titkana Peak, and across, by way of Phillips Mountain and the ridges of the Lynx Mountains, including Billings Butte, to Robson Peak. By air line, the actual distance was only nine and one half miles, but the course followed was necessarily a very irregular one, since it was only possible to examine the exposed sections free from snow fields and glaciers, and consequently covered a great distance. It was found that the depth of the stratigraphic section examined was approximately 12,000 feet of Cambrian rocks and 3,000 feet of Ordovician; the transition between the two systems being in Billings Butte, which projects upward near Hunga Glacier.

Many fine specimens of a new sub-fauna of the Lower Cambrian series of rocks were located by Dr. Walcott at the northern base of Mumm Peak above Mural Glacier, which will add materially to the National Museum collections, already well advanced by his extensive contributions.

Undoubtedly the work of Dr. Walcott in this vicinity, and generally in the Canadian Rockies, has done more toward the advancement of human knowledge in invertebrate paleontology, especially as regards the Cambrian life, than that of any other student of similar researches. His prime object seems to be the true one of advancing the knowlege of geology and paleontology of this district, generally and not solely through his own researches. In this respect many of his photographs are taken with a view of enabling future explorers and scientists to recognize the localities and the general positions of the formations he has discovered. Further than this, he has revised, to a certain extent with the approval of the Canadian Board of Geographic Names, the nomenclature of many points of general and particular interest, making their locations and designations clearer by labeling his wonderfully detailed panoramic views, thereby happily tying art and science. In a recent Smithsonian publication he states with modesty, that although he was not the original explorer of this district, it fell to his lot to be the first to make a study of the geologic section, and this necessitated the application of additional names in locating, describing, and designating the geologic formations.

Two members of the party devoted their time to zoological collecting, and secured a number of mammal skins and skulls for the National Museum, thereby increasing the earlier collections obtained in this region by the Smithsonian Biological Survey party which accompanied the Alpine Club on the topographical survey in the summer of 1911.

With the completion of the railroads and the continuation of scientific researches, with the resulting literature of both, there is little doubt that the Robson Peak District will be well advertised, or that this high, cool, clear-aired portion of the country will remain long unknown and unvisited by the tourist, the vacationist, and eventually the home-seeker.

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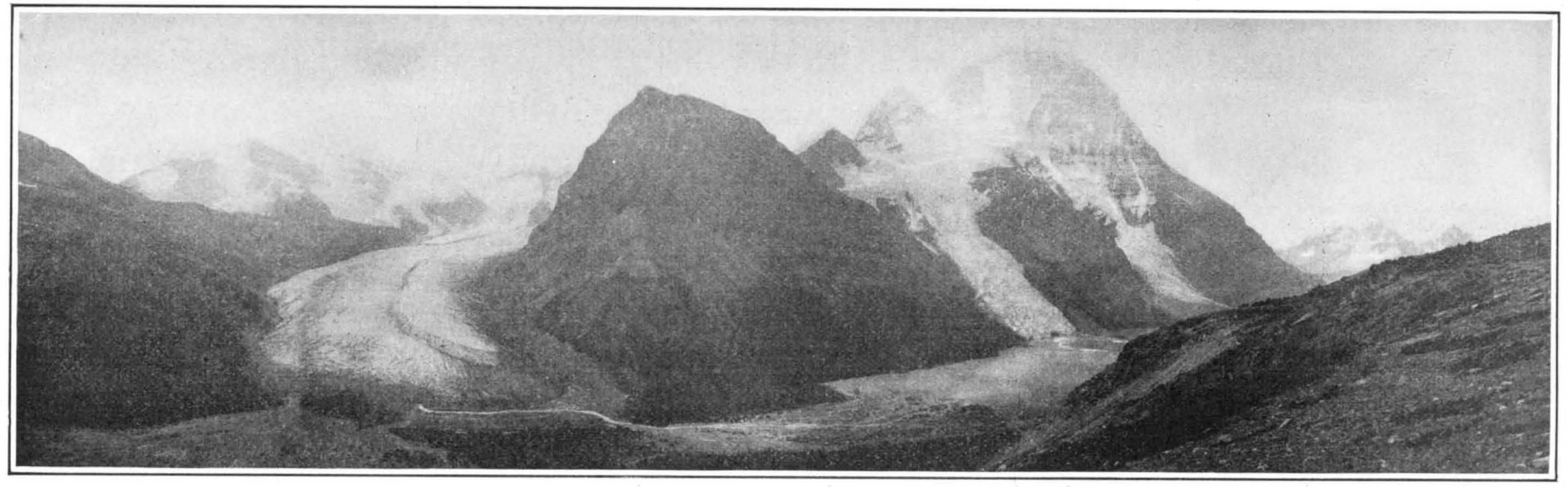

Fig. 13.—Robson, from a point on the south slope of Mumm Peak; Robson Peak to the right of the center; Hunga Glacier flowing into Robson Pass from between Titkana and Iytunga Mountains; Blue and Chupo Glaciers on the right, gliding directly into Berg Lake. Photo by Dr. Charles D. Walcott.

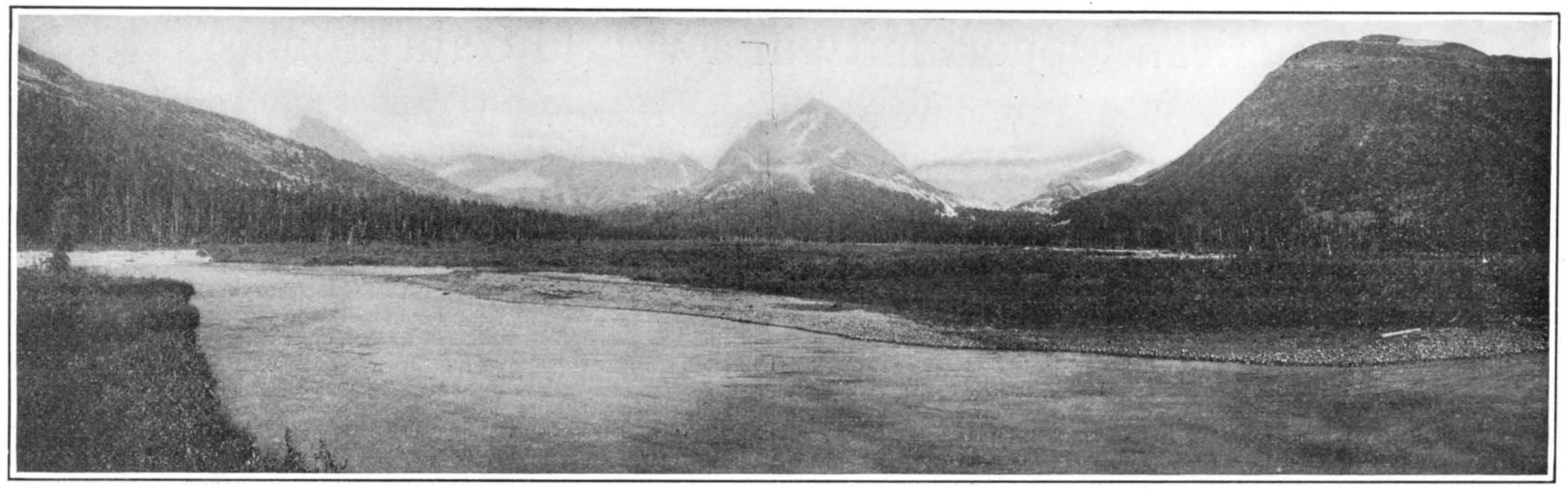

Fig. 14.—Looking south across the flats of Calumet Creek; Tah (Moose) Peak is in the center, with Moose Pass below at the left, and Mahto (Grizzly Bear) Mountain is seen on the right. Photo by Dr. Charles D. Walcott.

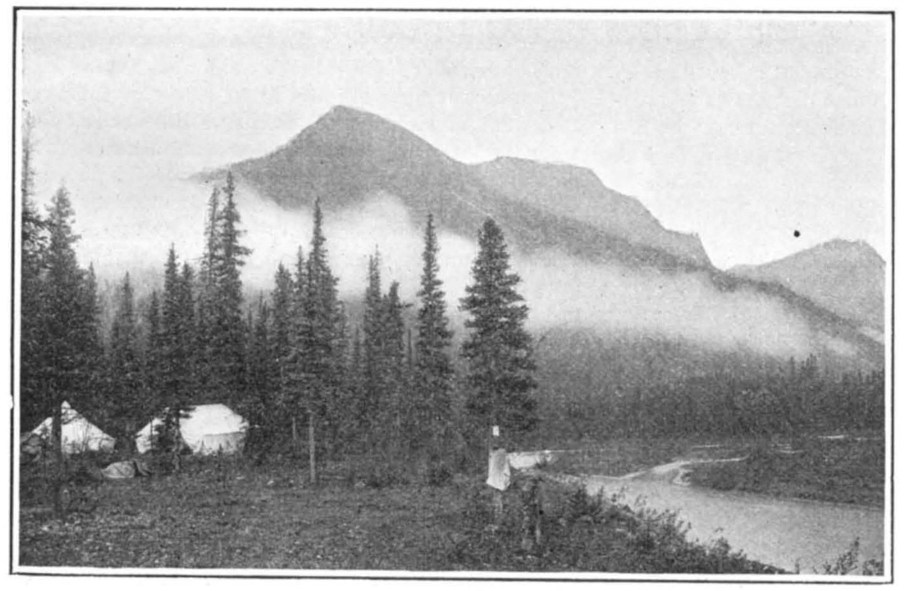

Fig. 2.—A misty day at Camp A, on Hihuna River above its junction with the Moose. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

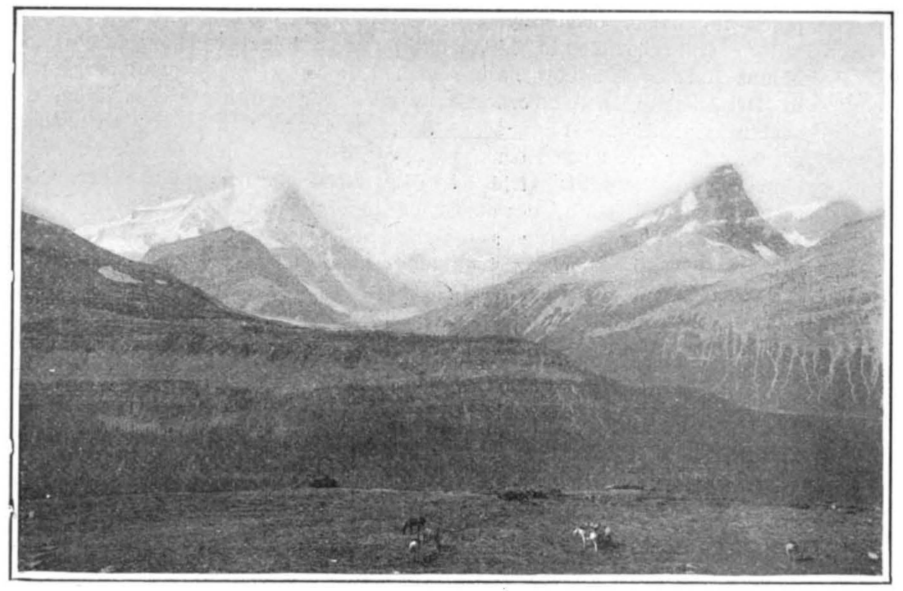

Fig. 5.—On the slope of Mahto Mountain; Robson and Mumm Peaks in the distance. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

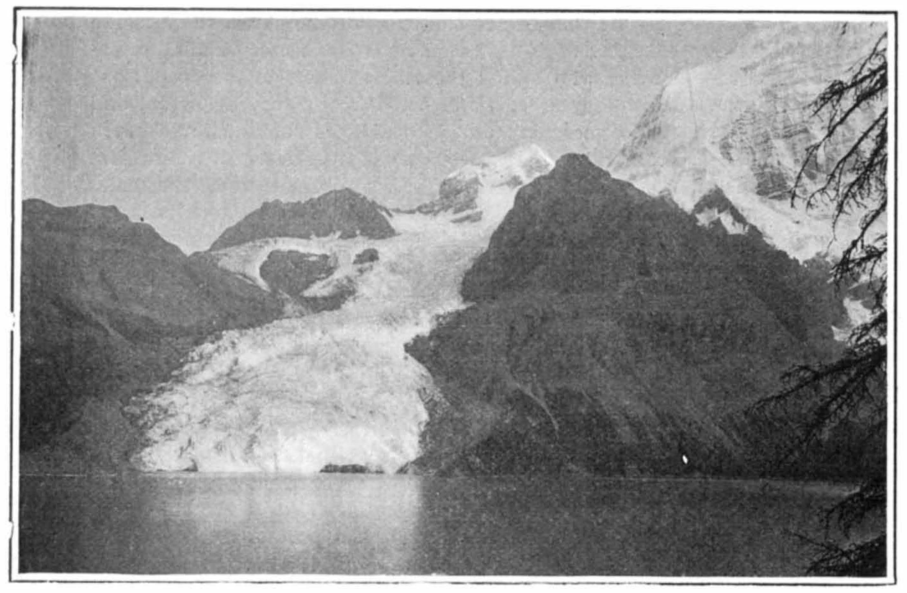

Fig. 6.—Dreamland, at the foot of Robson; Blue Glacier and 'Berg Lake. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

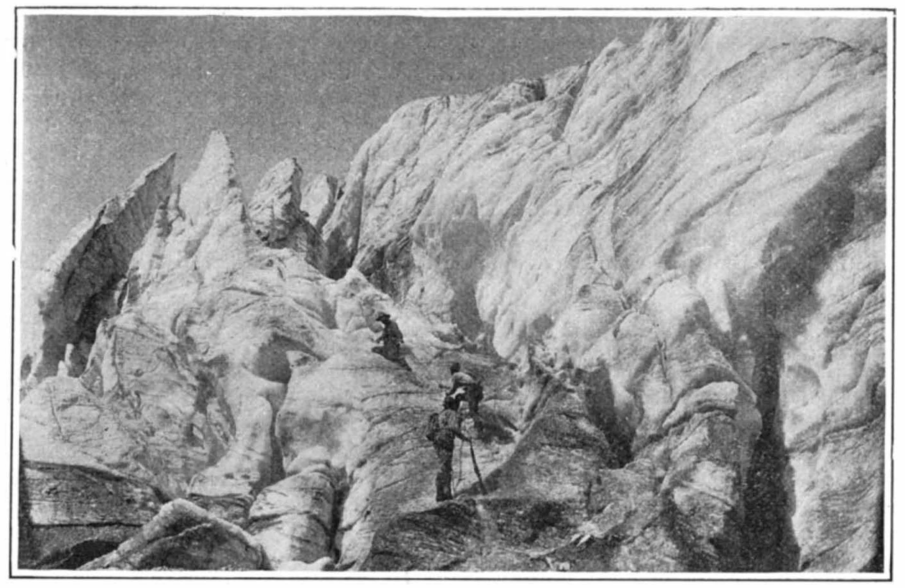

Fig. 7.—Climbing Alpine fashion over the ice-foot of the Hunga Glacier. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

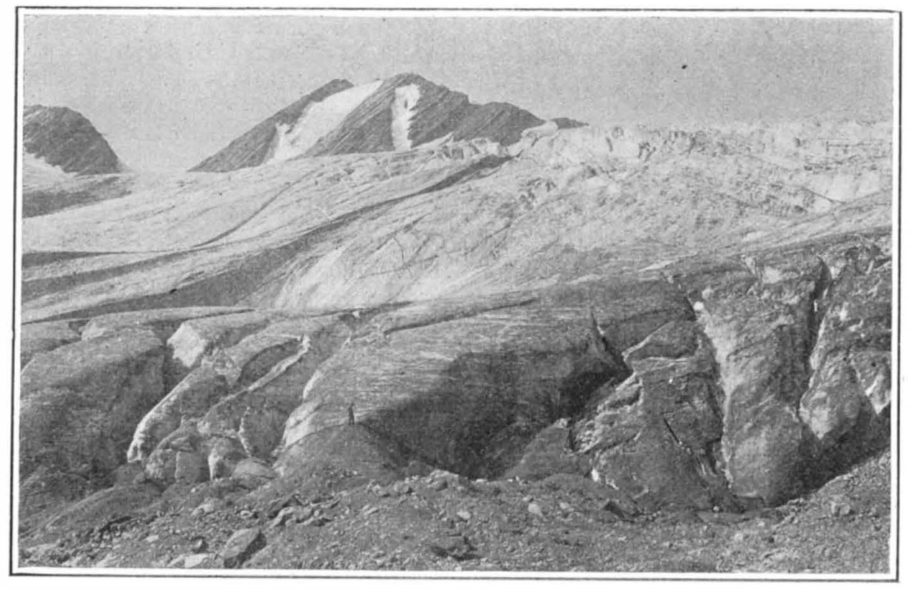

Fig. 8.—An unnamed glacier above Moose Pass and below Calumet Peak. The three men on the glacier give an idea as to its size and extent. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

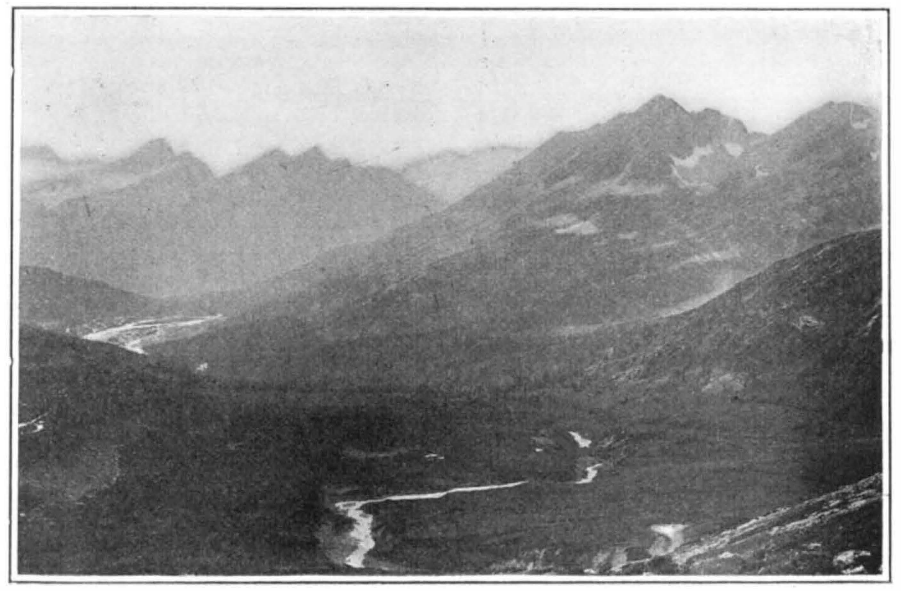

Fig. 9.—Looking down through the Valley of Flowers, toward the first camp in Calumet Creek. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

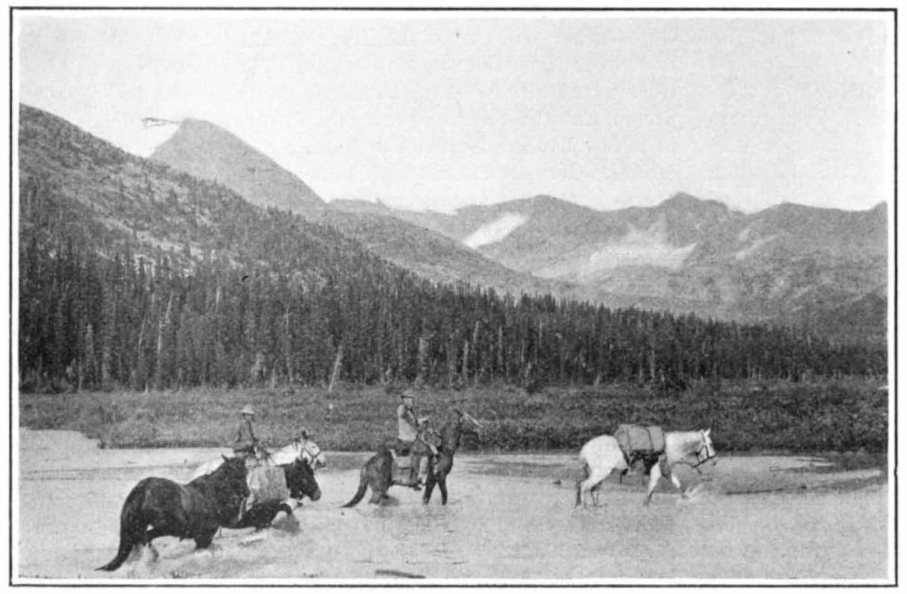

Fig. 12.—Dr. Walcott and party crossing Calumet Creek. Photo by Mr. R. C. W. Lett, Grand Trunk Pacific Railway.

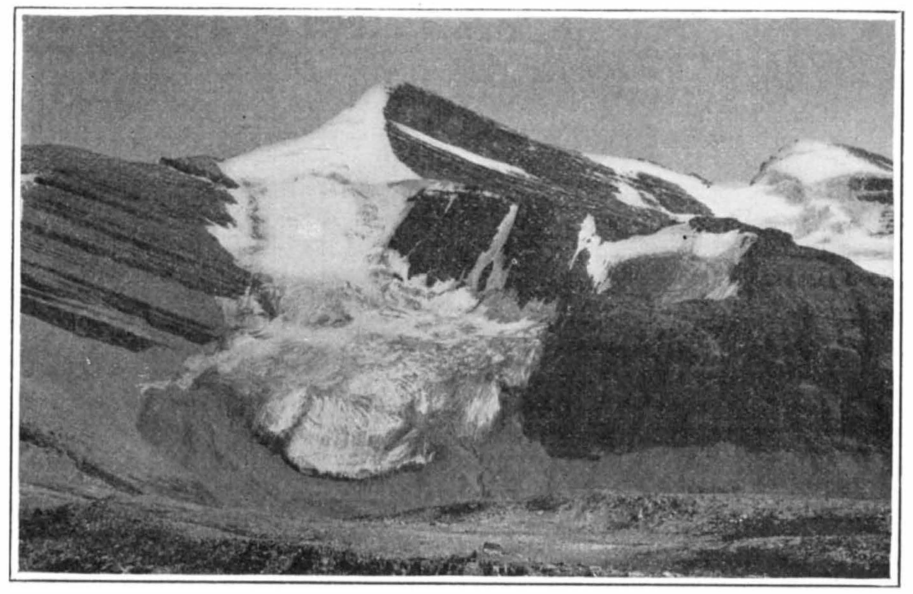

Fig. 17.—Phillips Mountain with Cushina Glacier extending a mile down its west slope. Photo by Dr. Charles D. Walcott.

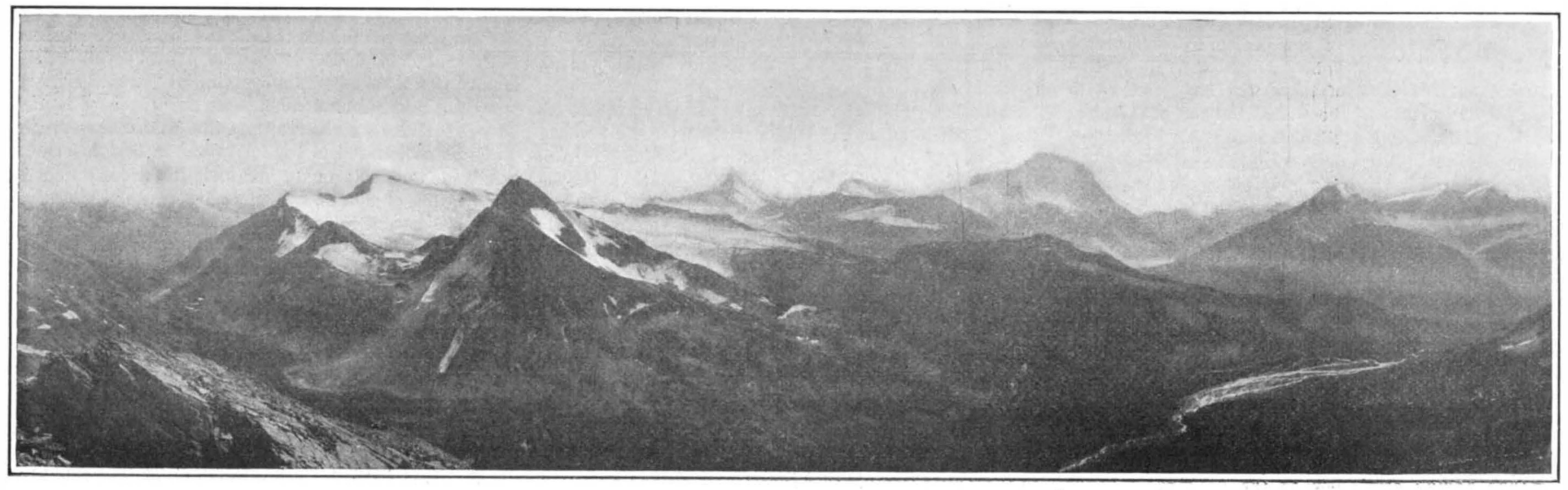

Fig. 15.—Looking down into Calumet Creek; Tah Peak in the center above Moose Pass; to the right Lynx Mountain; Robson Peak, above Berg Lake; and Mumm Peak showing Mural Glacier. Photo by Dr. Charles D. Walcott.

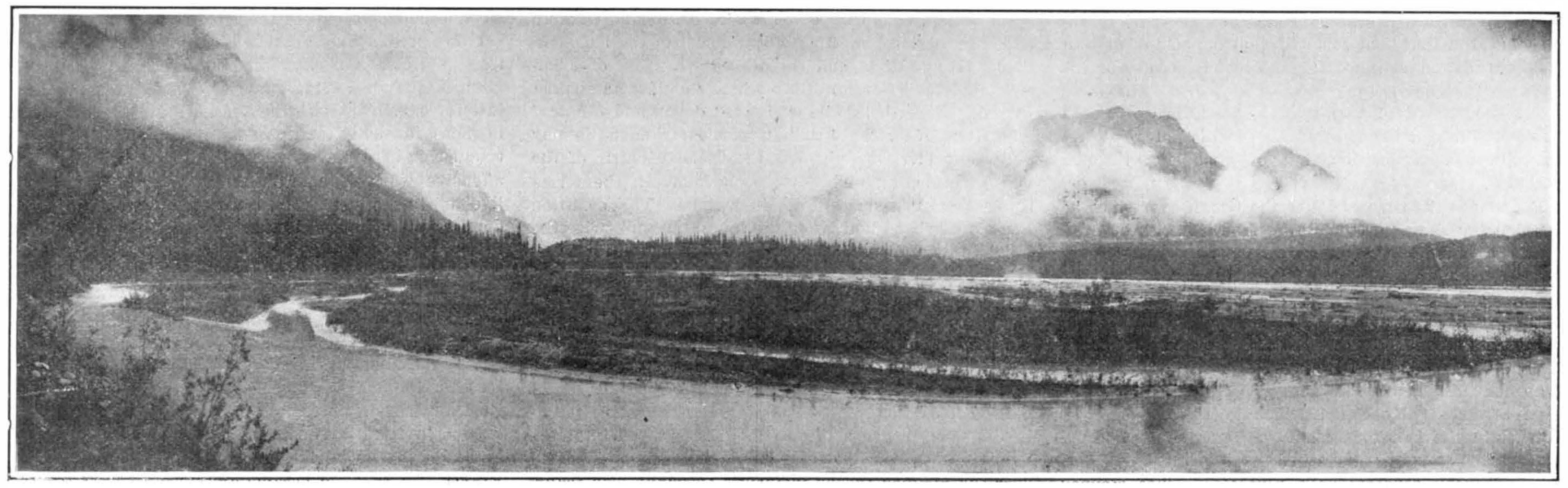

Fig. 16.—Calumet Creek from Camp A, above the junction of the Moose and Hihuna Rivers, nine miles southeast from Robson. The Lynx Mountains in the mist. Photo by Dr. Charles D. Walcott.

THE PINNACLE OF THE CANADIAN ALPS

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